

AMENDMENTS TO THE CLAIMS

Please amend claim 29, add claims 36-46, and cancel claims 1-20, 22-28, and 30-35, as set forth in the listing of claims that follows:

1-28. (Cancelled)

29. (Currently Amended) A fuel cell system comprising:
a fuel reformer for generating a feed stock comprising H₂ and CO;
a CO-selective oxidation reactor in fluid communication with said fuel
reformer for treating said feed stock to oxidize CO, wherein said CO-selective oxidation
reactor comprises a housing disposed around a substrate comprising a CO-selective
oxidation catalyst comprising: a catalytic material, wherein said catalytic material
selected from the group consisting of comprises Pt, Pd, Rh, Ir, Os, Ru, Ta, Zr, Y, Ce, Ni,
Cu, and oxides, alloys, and compounds thereof, and combinations comprising at least one
of the foregoing, a modifying agent selected from the group consisting of Pb, Bi, Ge, Si,
Sb, As, P, and alloys, nitrates, sulfides, and chlorides thereof and combinations
comprising at least one of the foregoing, wherein said modifying agent is present in an
amount of about 2 to about 25 atomic percent based on the total surface atoms of said
catalytic material, and a support; and
a fuel cell in fluid communication with said CO-selective oxidation reactor.

30-35. (Cancelled)

36. (New) The fuel cell system of Claim 29, wherein said catalytic material is selected from the group consisting of Pt, Pd, Rh, Ir, and oxides, alloys, and compounds thereof.

37. (New) The fuel cell system of Claim 29, wherein said CO-selective catalyst comprises about 8 to about 15 atomic percent of said modifying agent.

38. (New) The fuel cell system of Claim 29, wherein said support is selected from the group consisting of alumina, titania, zirconia, and combinations comprising at least one of the foregoing supports.

39. (New) The fuel cell system of Claim 29, wherein the CO-selective oxidation catalyst comprises about 0.5 to about 5.0 wt% of said catalytic material, based upon a total weight of said catalytic material, said modifying agent, and said support.

40. (New) The fuel cell system of Claim 39, wherein the CO-selective oxidation catalyst comprises about 1.0 to about 3.5 wt% of said catalytic material.

41. (New) The fuel cell system of Claim 40, wherein the CO-selective oxidation catalyst comprises about 1.8 to about 2.5 wt% of said catalytic material.

42. (New) The fuel cell system of Claim 29, wherein the CO-selective oxidation catalyst comprises about 0.01 to about 0.5 wt% of said modifying agent, based upon a total weight of said catalytic material, said modifying agent, and said support.

43. (New) The fuel cell system of Claim 42, wherein the CO-selective oxidation catalyst comprises about 0.05 to about 0.30 wt% of said modifying agent.

44. (New) The fuel cell system of Claim 43, wherein the CO-selective oxidation catalyst comprises about 0.10 to about 0.20 wt% of said modifying agent.

45. (New) The fuel cell system of Claim 29, wherein the wherein the CO-selective catalyst is capable of preferentially removing carbon monoxide over hydrogen removal.

46. (New) The fuel cell system of Claim 45, wherein the CO-selective catalyst is capable of the removal of the carbon monoxide in a feed stock while oxidizing less than about 3 mole% hydrogen in a feed from a reformer.